

ward into Dorset, and N. Essex through Suffolk into Cambs. The latter of these areas of distribution now evidently requires to be extended southward to N.E. Kent. It further seems very possible that during periods of scarcity the beetles live rather high up—beyond the reach of the ordinary beating-stick—in some of the larger ash trees*, so that only stragglers, at most, would probably ever be seen; and that only after a build-up in their numbers do they spread to related shrubs such as privet and lilac, where, naturally, they soon attract attention. The larva has been found here perhaps only once, in Suffolk, but as an inhabitant of the underground nests of certain solitary bees it would in any event be seldom observed. — A. A. ALLEN.

* The late Horace Donisthorpe told me that he obtained his series in an East Anglian locality where it had occurred in the past, by spreading very large sheets under a suitable-looking ash and jarring the boughs and foliage with a long pole.

LASIOCAMPA QUERCUS SSP. CALLUNAE PALMER (NORTHERN EGGAR) ATTRACTED BY CITRONELLA? — On the 12th July I took a lady visitor to the top of Tallabrig on the low hill on the island of Sanday to see the view of other islands and also inspect the *Z. purpuralis* colony nearby. Being stockingless, she had anointed her ankles with citronella to repel the midges. To our surprise a male *L. quercus (callunae)* came up, circled around and landed on her feet, around which it fluttered, apparently attracted by the odour of the citronella. — J. L. CAMPBELL, Isle of Canna, Scotland.

OBSERVATIONS ON THE PUPAL STAGE OF THE PURPLE HAIRSTREAK (THECLA QUERCUS L.). — In 1976 and 1977 I reared a small number of Purple Hairstreaks (*Thecla quercus*) from larvae collected on Inchcailloch, part of the Loch Lomond National Nature Reserve. Particular attention was paid to the length of the pupation period, as there is a general lack of agreement in the entomological literature on this aspect of the butterfly's life history. As examples: "a fortnight or so" (Rowland-Brown, 1912), "20 days" (Acworth, 1947), "about 30 days" (Frohawk, 1934), "about 36 days" (Sanders, 1939). It is noteworthy that most of the early standard works are silent on the subject.

Just prior to the onset of metamorphosis, all of the captive larvae went beneath the surface of the pupating mixture provided, there taking about 2-3 days to achieve the final pupal state. Following a cool June/early July in West Scotland during 1976, the butterflies emerged 22 days after the larvae had begun the pre-pupal stage, but with much warmer weather over the same period in 1977 the complete metamorphosis from larva to butterfly was unexpectedly prolonged by a further 4-5 days. Similar observations have been made by Dr. C. J. Luckens of Southampton, who also reared a number of *T. quercus* in 1976 (*Ent. Rec.*, **89**: 170) and 1977. In southern Britain, however, the weather pattern during the pupation